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MERCURY-VAPOR THYRATRON

NEGATIVE-CONTROL TETRODE TYPE

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage 5[•] ac or dc volts

Current 5 amp

Cathode:

Minimum heating time prior to

tube conduction 5 minutes

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to anode. 0.04 μ mfGrid No.2 to anode. 3 μ mfIonization Time (Approx.) 10 μ secDeionization Time (Approx.) 1000 μ secMaximum Critical Grid-No.1 Current. 2 μ amp

Anode Voltage Drop (Approx.) 12 volts

Mechanical:

Mounting Position Vertical, base down

Maximum Overall Length. 8-5/16"

Seated Length 7-1/2" \pm 1/4"

Maximum Radius (Including side cap) 1-3/4"

Weight (Approx.) 9 oz

Bulb. T-18

Top Cap Skirted Medium (JETEC No.C1-29)

Side Cap. Saddle Medium

Base. Skirted-Medium-Shell Small 4-Pin

with Bayonet (JETEC No.A4-71)

Basing Designation for BOTTOM VIEW. 4CD

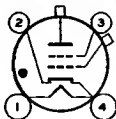
Pin 1-Heater

Pin 2-Cathode,

Circuit

Returns

Pin 3-Grid No.2



Pin 4-Heater,

Cathode

Top Cap-Anode

Side Cap-Grid No.1

Temperature Control:

Heating--When the ambient temperature is so low that the normal rise of condensed-mercury temperature above the ambient temperature will not bring the condensed-mercury temperature up to the minimum value of the operating range specified under *Maximum Ratings*, some form of heat-conserving enclosure or auxiliary heater will be required.

Cooling--When the operating conditions are such that the maximum value of the operating condensed-mercury temperature is exceeded, provision should be made for forced-air cooling sufficient to prevent exceeding the maximum value.

- Under operating conditions where the average anode current does not exceed 0.5 ampere, the heater voltage may be increased to 5.5 volts.

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TUBE DIVISION

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



MERCURY-VAPOR THYRATRON

IGNITOR-FIRING AND GRID-CONTROLLED RECTIFIER SERVICE

Maximum Ratings, Absolute Values:

For anode-supply frequency of 60 cps

 Operating Condensed-Mercury
 Temperature Range
 40° to 80°C [■]

PEAK ANODE VOLTAGE:

 Forward. 1500 max. volts
 Inverse. 1500 max. volts

GRID-No.2 (SHIELD-GRID) VOLTAGE:

Peak, before tube conduction -300 max. volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:

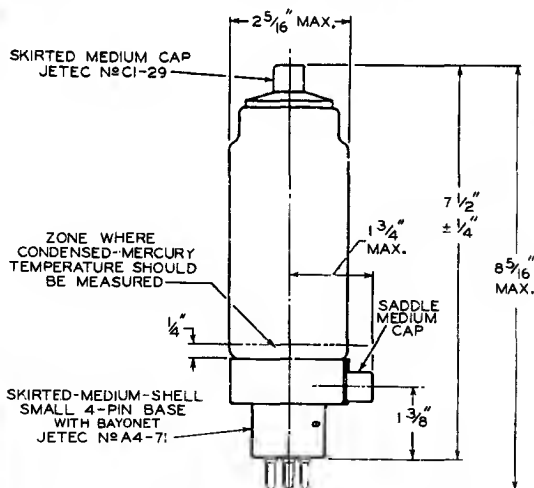
Peak, before tube conduction -1000 max. volts

CATHODE CURRENT:

 Peak 30 max. amp
 Average[#] 2.5 max. amp

Fault, for duration of 0.1

second max. 150 max. amp

AVERAGE GRID-No.2 CURRENT[#] +0.25 max. ampAVERAGE GRID-No.1 CURRENT[#] +0.25 max. amp[■] Recommended temperature range of condensed mercury is 45° to 50°C .[#] Averaged over any interval of 30 seconds maximum.



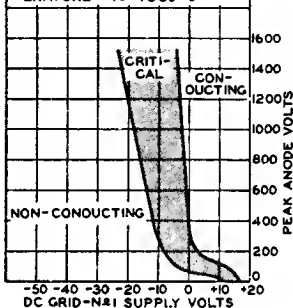
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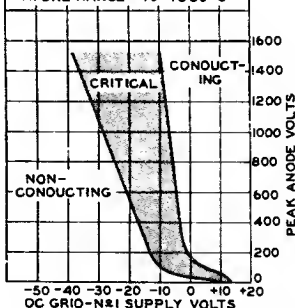
OPERATIONAL RANGES
OF CRITICAL GRID-N₂1 VOLTAGE

$E_f = 5$ VOLTS
 GRID-N₂2 (SHIELD) VOLTS = 0
 RANGE SHOWN TAKES INTO AC-
 COUNT INITIAL DIFFERENCES
 BETWEEN INDIVIDUAL TUBES
 AND SUBSEQUENT DIFFER-
 ENCES DURING TUBE LIFE.
 GRID RESISTOR = 0 OHMS
 CONDENSED-MERCURY TEMP-
 ERATURE = 40° TO 80° C



92CS-9008T

$E_f = 5$ VOLTS
 GRID-N₂2 (SHIELD) VOLTS = 10
 RANGE SHOWN TAKES INTO AC-
 COUNT INITIAL DIFFERENCES
 BETWEEN INDIVIDUAL TUBES
 AND SUBSEQUENT DIFFER-
 ENCES DURING TUBE LIFE.
 GRID RESISTOR = 0 OHMS
 CONDENSED-MERCURY TEMPER-
 ATURE RANGE = 40° TO 80° C



92CS-9007T